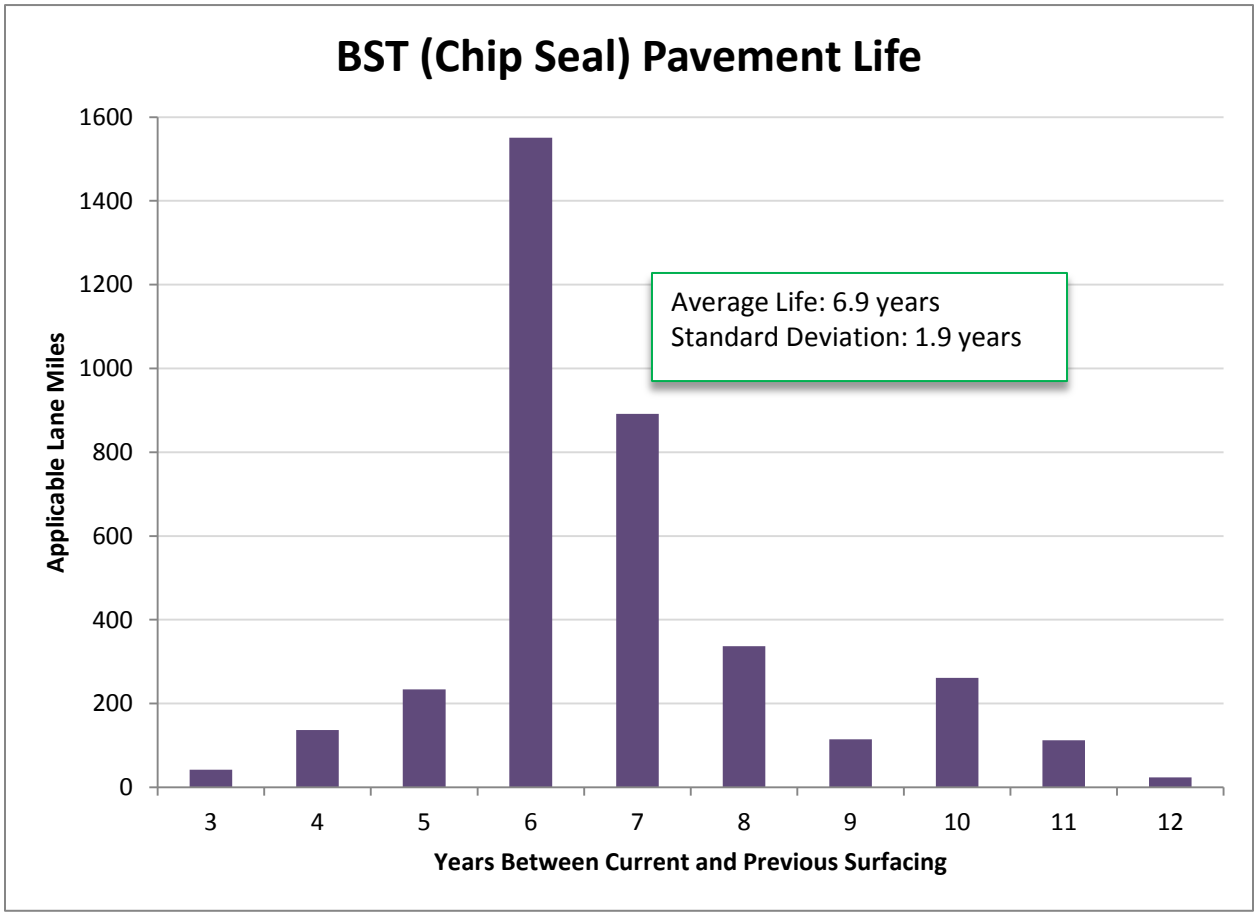
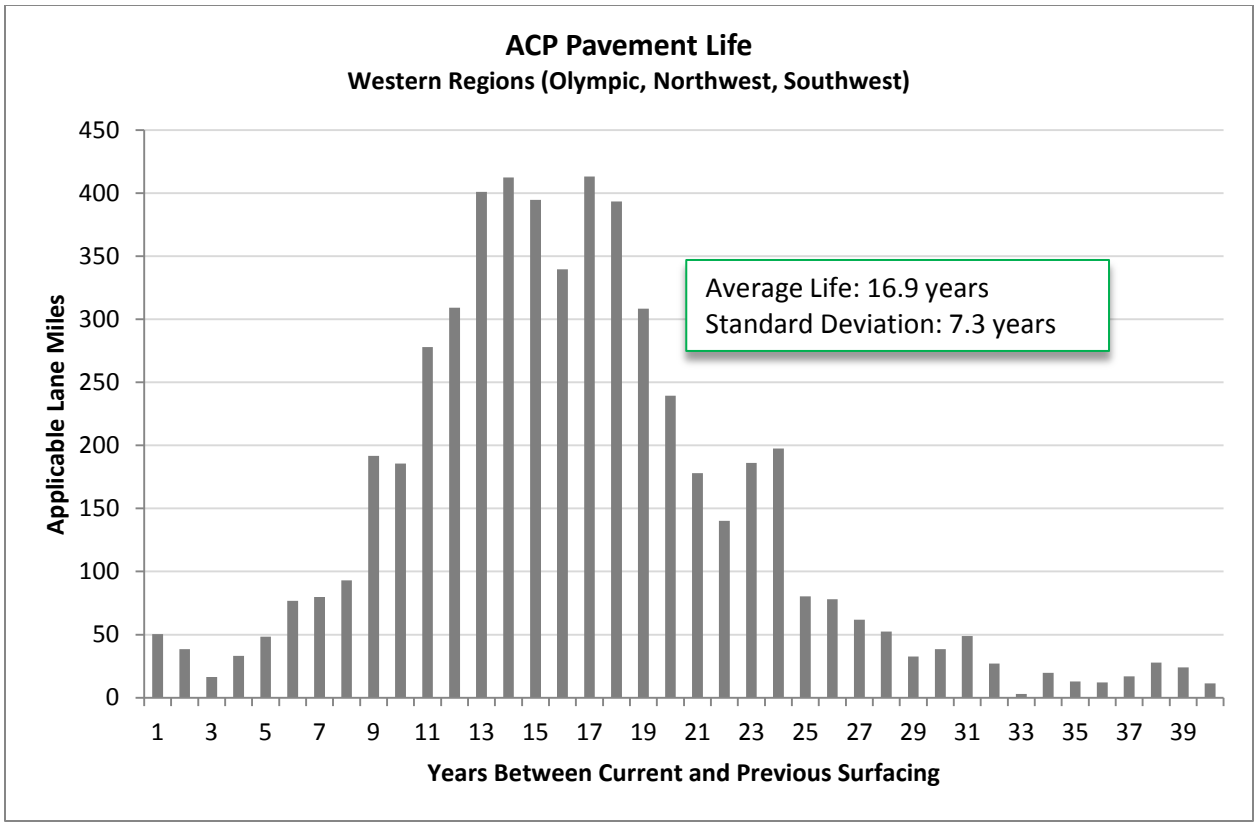
AVERAGE PAVEMENT LIFE IN WASHINGTON STATE

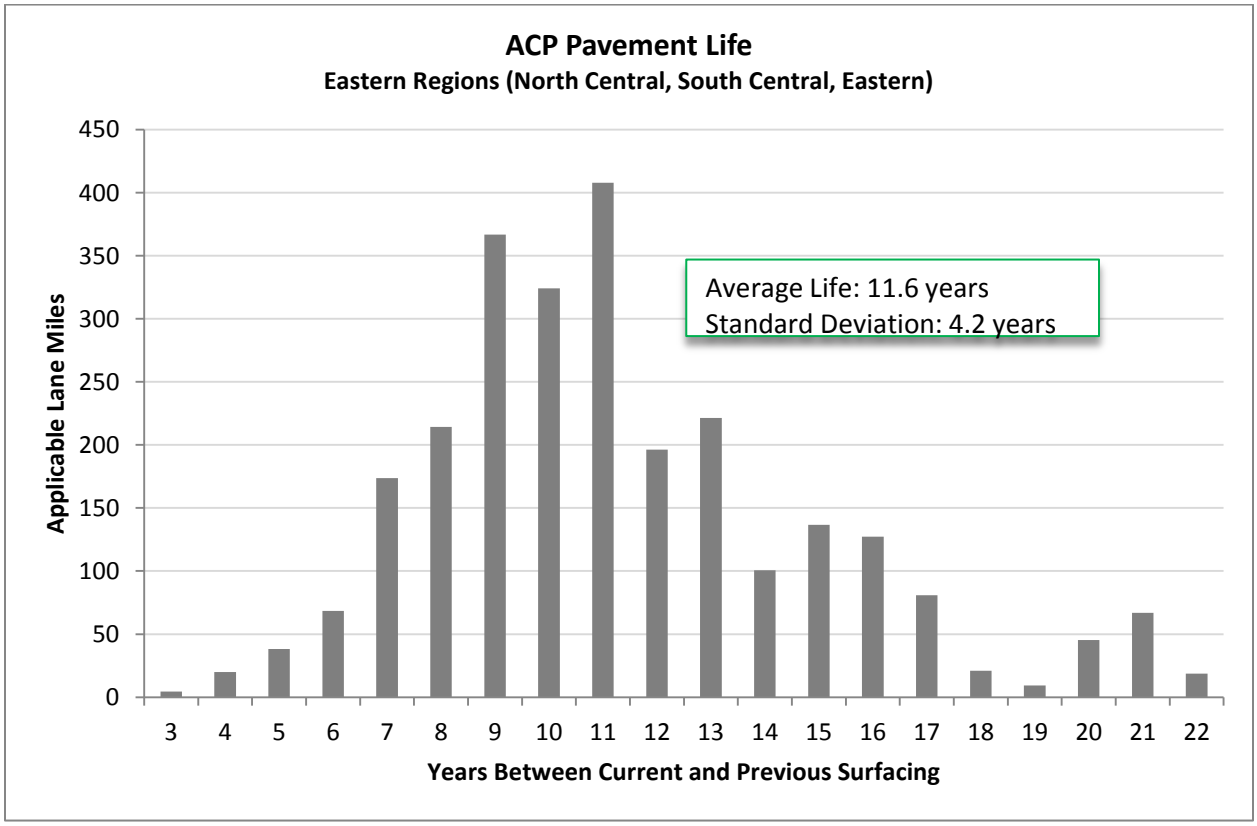
2014 Update, Produced 2/17/2015

The following charts illustrate the average pavement life for state-maintained roads. For flexible pavements, pavement life is defined as the number of years between resurfacings. There are two main types of flexible pavements, Bituminous Surface Treatments (BST) and Asphalt Concrete Pavements (ACP). For BST pavements, pavement life is relatively uniform statewide. This is because BSTs are thin and cost effective, but have a relatively short life. They are used primarily on roadways with low volumes of traffic.

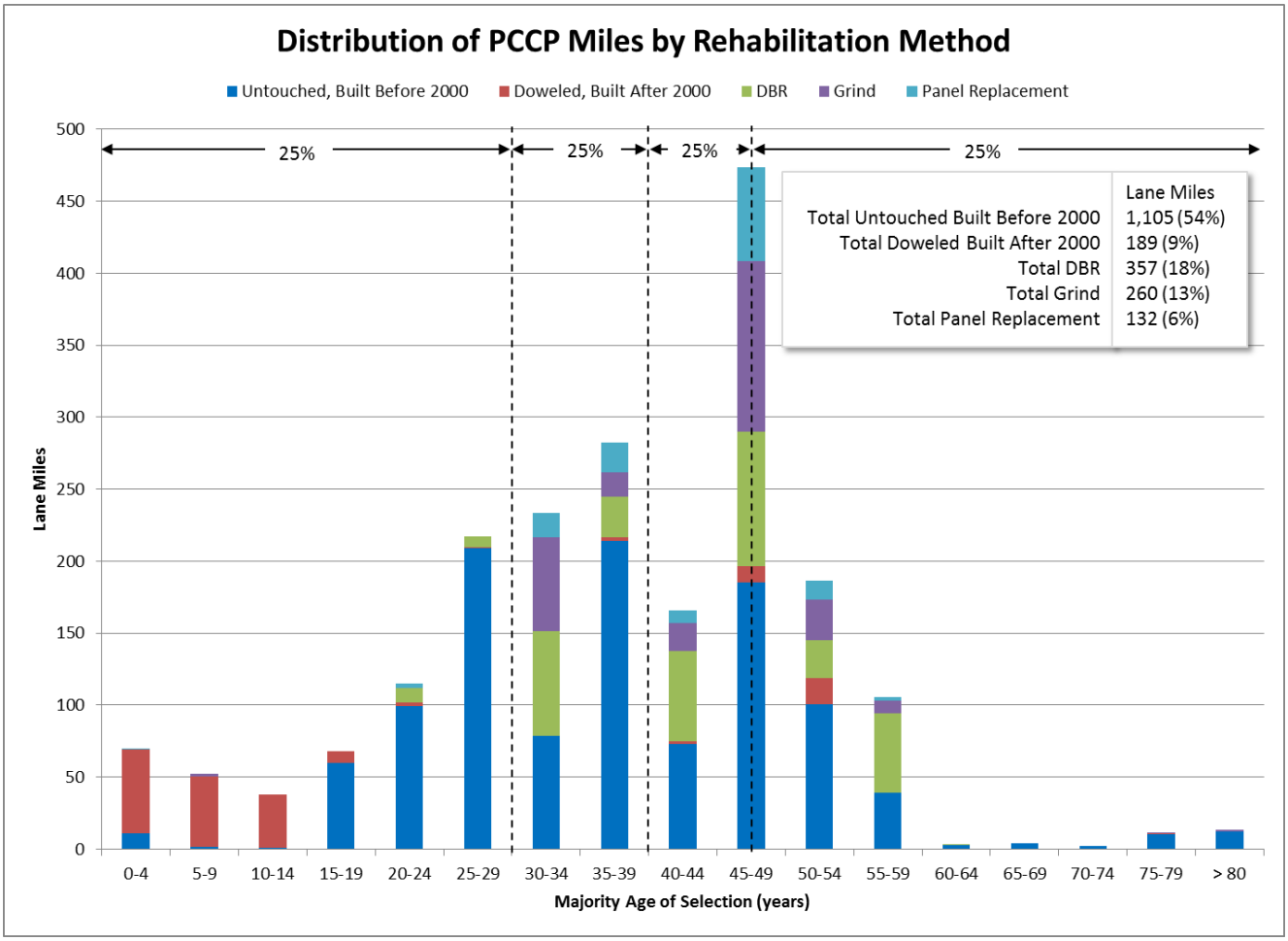


For Asphalt Concrete Pavement (ACP), pavement life is different on the West and East side of the state. This is because of the harsher climate on the East side of the state, greatly reducing the life of the pavement relative to the West side of the state.


ACP Pavement Life
Western Regions (Olympic, Northwest, Southwest)
Applicable Lane Miles
450
400
350
300
250
200
150
100
50
0
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39
Years Between Current and Previous Surfacing
Average Life: 16.9 years
Standard Deviation: 7.3 years


ACP Pavement Life
Eastern Regions (North Central, South Central, Eastern)
Applicable Lane Miles
450
400
350
300
250
200
150
100
50
0
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
Years Between Current and Previous Surfacing
Average Life: 11.6 years
Standard Deviation: 4.2 years

The rigid pavement type used in Washington State, Portland Cement Concrete Pavement (PCCP), needs more explanation. The majority of these pavements were constructed during the late 1950s and 1960s as part of the interstate highway program. At that time, the pavement design life for these roadways was estimated to be about 20 years. These pavements have far exceeded their original design lives and carried many times the traffic load originally anticipated. Therefore, there is not a sufficient amount of PCCP in Washington State that has been replaced to accurately quantify a pavement life. However, considering the age of PCCP throughout the state, the miles that have been rehabilitated with grinding, Dowel Bar Retrofit (DBR), or selective panel replacement, gives a good understanding PCCP life.



This document is meant to be an overview of pavement life in Washington State. For more in depth information regarding Washington State pavement preservation strategies please see the Pavement Report to the Legislature.